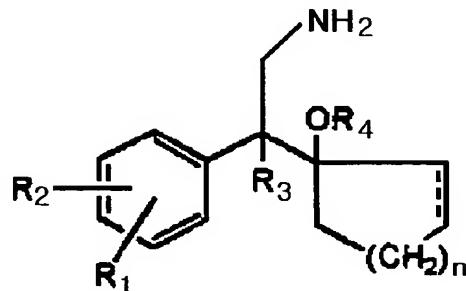


WHAT IS CLAIMED IS:

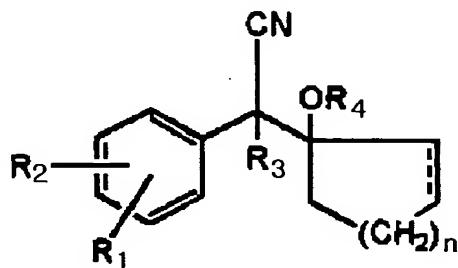
1. A process for the preparation of a compound of formula I,



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(I)

wherein R_1 and R_2 are ortho or para substituents, independently selected from the group consisting of hydrogen, hydroxyl, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_7-C_9 aralkoxy, C_2-C_7 alkanoyloxy, C_1-C_6 alkylmercapto, halo and trifluoromethyl; R_3 is hydrogen or C_1-C_6 alkyl; R_4 is hydrogen, C_1-C_6 alkyl, formyl or C_2-C_7 alkanoyl; n is one of the integers 10 0, 1, 2, 3 or 4; and the dotted line represents optional olefinic unsaturation; comprising, hydrogenating a compound of formula III,



(III)

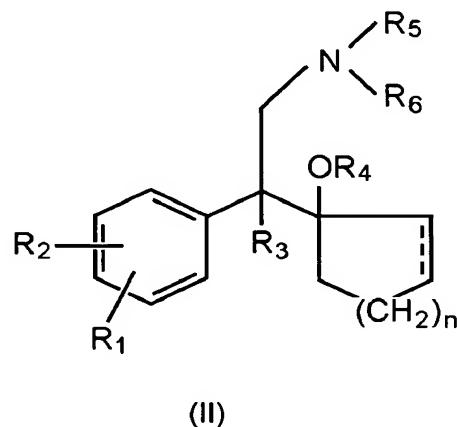
15 in the presence of a nickel or cobalt catalyst at a temperature of about 5°C to about 25°C.

2. The process of claim 1 wherein the catalyst is Raney-Ni.
3. The process of Claim 1 wherein the reaction temperature is from about 10°C
5 to about 25°C.
4. The process of Claim 3 wherein the reaction temperature is from about 15°C
to about 20°C.
- 10 5. The process of Claim 1 wherein hydrogenation is carried out in the presence
of methanol, ethanol or isopropyl alcohol.
6. The process of Claim 1 wherein the amount of catalyst is from about 10 to
about 50% by weight based on the amount of the compound of formula III.
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7. The process of Claim 6 wherein the amount of catalyst is from about 30 to
about 50% by weight based on the amount of the compound of formula III.
8. The process of Claim 1 wherein R₁ is hydrogen, hydroxyl, C₁-C₃ alkoxy,
20 chloro, bromo, trifluoromethyl or C₁-C₃ alkyl; R₂ is C₁-C₃ alkyl, C₁-C₃ alkoxy, chloro,
bromo, trifluoromethyl or C₂-C₃ alkanoyloxy; R₃ is hydrogen or C₁-C₆ alkyl; and R₄ is
hydrogen.
9. The process of Claim 1 wherein R₁ and R₂ are in a para position, and n is 2.

10. The process of Claim 1 wherein the compound of Formula I is 1-[2-amino-1-(4-methoxyphenyl)ethyl]cyclohexanol.

11. The process of Claim 1 wherein the compound of Formula I is 1-[2-amino-1-
5 (4-hydroxyphenyl)ethyl]cyclohexanol.

12. The process of Claim 1 further comprising alkylating the compound of formula
(I) to provide compound of Formula (II)



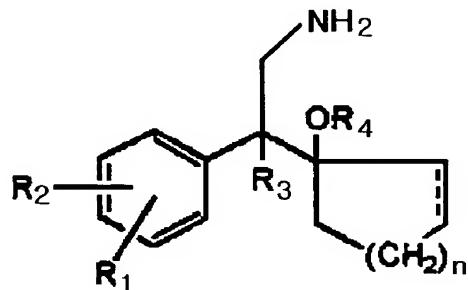
wherein R₁ and R₂ are ortho or para substituents, independently selected from the group consisting of hydrogen, hydroxyl, C₁-C₆ alkyl, C₁-C₆ alkoxy, C₇-C₉ aralkoxy, C₂-C₇ alkanoyloxy, C₁-C₆ alkylmercapto, halo and trifluoromethyl; R₃ is hydrogen or C₁-C₆ alkyl ; R₄ is hydrogen, C₁-C₆ alkyl, formyl or C₂-C₇ alkanoyl; R₅ is hydrogen or C₁-C₆ alkyl; R₆ is C₁-C₆ alkyl; n is one of the integers 0, 1, 2, 3 or 4; and the dotted line represents optional olefinic unsaturation.

13. The process of Claim 12, further comprising conversion of the compound of
20 formula (II) to a pharmaceutically acceptable salt.

14. The process according to Claim 13, wherein the compound of formula II is venlafaxine, O-desmethylvenlafaxine, N-desmethylvenlafaxine, N,N-didesmethylvenlafaxine, N,O-didesmethylvenlafaxine or O-desmethyl-N,N-didesmethylvenlafaxine, or a pharmaceutically acceptable salt thereof.

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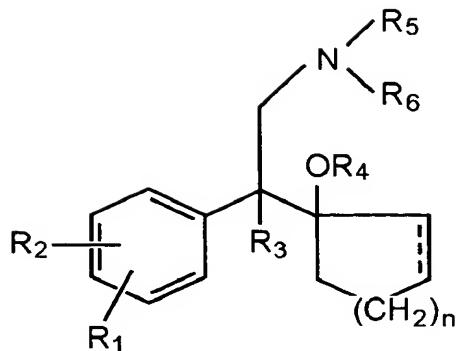
15. A composition of formula (I) prepared according to the process of Claim 1,



10 wherein R₁ and R₂ are ortho or para substituents, independently selected from the group consisting of hydrogen, hydroxyl, C₁-C₆ alkyl, C₁-C₆ alkoxy, C₇-C₉ aralkoxy, C₂-C₇ alkanoyloxy, C₁-C₆ alkylmercapto, halo and trifluoromethyl; R₃ is hydrogen or C₁-C₆ alkyl ; R₄ is hydrogen, C₁-C₆ alkyl, formyl or C₂-C₇ alkanoyl; R₅ is hydrogen or C₁-C₆ alkyl; R₆ is C₁-C₆ alkyl; n is one of the integers 0, 1, 2, 3 or 4; and the dotted line
15 represent optional olefinic unsaturation, substantially free of phenylalkylamine impurities.

16. A composition of Claim 15 wherein the compound is 1-[2-amino-1-(4-methoxyphenyl)ethyl]cyclohexanol or 1-[2-amino-1-(4-hydroxyphenyl)ethyl]cyclohexanol.

17. A composition of formula (II) prepared according to the process of Claim 13,



- wherein R₁ and R₂ are ortho or para substituents, independently selected from the
- 5 group consisting of hydrogen, hydroxyl, C₁-C₆ alkyl, C₁-C₆ alkoxy, C₇-C₉ aralkoxy, C₂-C₇ alkanoyloxy, C₁-C₆ alkylmercapto, halo and trifluoromethyl; R₃ is hydrogen or C₁-C₆ alkyl ; R₄ is hydrogen, C₁-C₆ alkyl, formyl or C₂-C₇ alkanoyl; R₅ is hydrogen or C₁-C₆ alkyl; R₆ is C₁-C₆ alkyl; n is one of the integers 0, 1, 2, 3 or 4; and the dotted line represents optional olefinic unsaturation, or a pharmaceutically acceptable salt thereof,
- 10 said composition being substantially free of phenylalkylamine impurities.

18. The composition of Claim 17 wherein the compound is venlafaxine, N-desmethylvenlafaxine, N,N-didesmethylvenlafaxine, or a pharmaceutically acceptable salt thereof, substantially free of 4-methoxyphenethylamine impurities.

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19. The composition of Claim 17 wherein the compound is O-desmethylvenlafaxine, N,O-didesmethylvenlafaxine, O-desmethyl-N,N-didesmethylvenlafaxine, or a pharmaceutically acceptable salt thereof, substantially free of 4-methoxyphenethylamine impurities.

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